

EXECUTIVE SUMMARY

Date Summary Prepared: February 10, 2012

Mine Name: Gem Mine	I.D. Number: M/053/0080
Operator: Good Earth Minerals, LLC	Date Original Notice Received: 7/19/2010
Address: 600 17 th Street, Suite 2800 S Denver, Colorado 80202-5428	County: Washington
	New/Existing New LMO
	Mineral Ownership: BLM
Contact Person: Fredric Johnson (Virgin Utah)	Surface Ownership: BLM
Telephone: (435) 635-2026	

Life of Mine: 20 years

Legal Description:

Portions of the North 1/2 of the Northeast 1/4 of the Northwest 1/4 of Section 24, Township 43 South, Range 17 West, SLBM, Washington County, Utah.

Mineral(s) to be Mined: Gypsum

Acres to be Disturbed: 13.3 acres (includes improved portions of access road)

Present Land Use: Grazing and wildlife habitat

Postmining Land Use: Grazing and wildlife habitat

Variances from Reclamation Standards (Rule R647) Granted: No variances

Soils and Geology

Soil Description: Soils in the project area range from gravelly fine sandy loam to stony loam; derived from gypsum, limestone, and to a lesser extent, siltstone parent materials. Soils within the proposed mining area are classified as Winkel-rock outcrop complex. Topsoil depth ranges from 0-24 inches with an average depth of 11 inches. Soils are well drained and are not considered sodic or saline. Soil pH ranges from 6.9 to 7.5 pH units. These soils are high in rock fragments, and low in organic matter and phosphorus. There are no other apparent problems with these soils.

Geology Description: Geology of the permit area include thick gypsum beds of the Permian Harrisburg member of the Kaibab (limestone) formation. These deposits are believed to have developed during regressions of Permian seas in salt flats or tidal flat lagoons between the shallow marine shelf and non-marine sediments

Hydrology

Ground Water Description: Ground water depth is estimated to be between 720 to over 1,000 feet below the lowest mining level of the mine. The closest well to the project area is over 4 miles away and is separated from the site by three named washes. This well is 720 lower than the project area and has a static water level of 29 feet.

Surface Water Description: No surface waters are close to the project area. Surface drainage from the project area could potentially reach the Virgin River over 3 miles from the site. The operator will have a storm water pollution prevention plan to prevent potential contaminants from leaving the site.

Water Monitoring Plan: No water monitoring plan is required.

Ecology

Vegetation Type(s); Dominant Species: Vegetation of the site is a desert shrub grassland community, dominated by indigobush, globemallow and creosote bush. Annual weedy species abound, including filaree, tumble weed and cheat grass. Average perennial vegetation ground cover is about 10%.

Several rare plants could potentially inhabit the project area, include the dwarf bear-claw poppy, Holmgren milkvetch, Siler pincushion, Pary's sandpaper plant, and Gierisch globemallow. None of these rare plants were observed during the survey.

Wildlife Concerns: The project area does not include critical habitat for wildlife. There is a potential for the Mohave Desert Tortoise to be in the area, but surveys for the tortoise were negative. Two red-tail hawk nests are in the general area but are over 0.5 miles (and out of line site) away from the project area.

Surface Facilities: No permanent facilities are proposed for this operation. Temporary facilities include crushing and screening equipment.

Mining and Reclamation Plan Summary:

During Operations:

Turnouts will be constructed along the access road to allow for safe passage of vehicles. Before mining, the operator will salvage a foot of topsoil and stockpile for reclamation. Six inches of soil will be bladed to the sides from the work area, and this soil will be stored in a berm. This berm will also function to identify the permit boundary. Gypsum will be removed using a continuous miner, dozers and scrapers. Gypsum will be loaded in haul trucks and shipped for off-site processing. Check dams will be strategically placed to control any runoff. Two water trucks will be used for dust suppression on the site and access road. Mining will start at the top of the deposit and proceed down to the final contour levels.

After Operations:

Topsoil will be replaced on the mined area at approximately 12-inch depth. The work area will have the 6 inches of soil replaced that was bladed to the sides. Areas will then be ripped to a two-foot dept to mitigate compaction. Soil amendments/fertilizers (if needed) will be applied prior to final ripping. The area will then be seeded with a seed mix designed to meet the needs of the post mining land use of grazing and wildlife habitat.

Surety

Amount: \$94,160.00

Form: not known at this time.

Renewable Term: 5 years